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L1: Entry 1 of 1

File: USPT

Apr 25, 2000

US-PAT-NO: 6054289

DOCUMENT-IDENTIFIER: US 6054289 A

TITLE: Polynucleotides encoding human ADA2

DATE-ISSUED: April 25, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Moore; Paul A.	Aberdeen			GBX

US-CL-CURRENT: 435/69.1; 435/252.3, 435/254.11, 435/320.1, 435/325, 530/300, 530/350, 536/23.1, 536/23.5

## CLAIMS:

I claim:

1. An isolated polynucleotide consisting of a nucleic acid sequence selected from the group consisting of:

(a) a polynucleotide encoding amino acids 2-443 of SEQ ID NO:13;

(b) a polynucleotide encoding amino acids 1-443 of SEQ ID NO:13;

(c) a polynucleotide encoding the amino acid sequence encoded by the cDNA contained in ATCC Deposit No. 97242;

(d) a polynucleotide encoding at least 30 contiguous amino acids of SEQ ID NO:13 or the cDNA clone contained in ATCC Deposit No. 97242;

(e) a polynucleotide encoding at least 50 contiguous amino acids of SEQ ID NO:13 or the cDNA clone contained in ATCC Deposit No. 97242;

(f) a polynucleotide of at least 30 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242;

(g) a polynucleotide of at least 40 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242;

(h) a polynucleotide of at least 50 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242;

(i) a polynucleotide of at least 60 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242; and

(j) the complement of (a), (b), (c), (d), (e), (f), (g), (h), or (i).

2. The isolated polynucleotide of claim 1, wherein said polynucleotide is (a).

3. The isolated polynucleotide of claim 2, which comprises nucleotides 124 to 1449 of SEQ ID NO:2.

4. The isolated polynucleotide of claim 1, wherein said polynucleotide is (b).

5. The isolated polynucleotide of claim 4, which comprises nucleotides 121 to 1449 of SEQ ID NO:2.
6. The isolated polynucleotide of claim 1 fused to a heterologous polynucleotide.
7. The isolated polynucleotide of claim 6, wherein the heterologous polynucleotide encodes for a heterologous polypeptide.
8. The isolated polynucleotide of claim 1, wherein the polynucleotide is double stranded.
9. A recombinant vector comprising the polynucleotide of claim 1.
10. A recombinant host comprising the polynucleotide of claim 1.
11. An isolated polynucleotide that hybridizes to SEQ ID NO:2 or the cDNA clone contained in ATCC Deposit No. 97272, wherein said hybridization takes place under hybridization conditions comprising hybridization in a buffer consisting of 5.times.TEN, 5.times.Denhardtts, 0.5% Denhardtts, 0.5% sodium pyrophosphate, 0.1% SDS, and 0.2 mg/ml heat denatured salmon sperm DNA for 12 hours at 55.degree. C., and wash in a buffer consisting of 0.5.times.TEN for 15 minutes at 55.degree. C.
12. An isolated polynucleotide comprising a nucleic acid sequence selected from the group consisting of:
  - (a) a polynucleotide encoding amino acids 2-443 of SEQ ID NO:13;
  - (b) a polynucleotide encoding amino acids 1-443 of SEQ ID NO:13;
  - (c) a polynucleotide encoding the amino acid sequence encoded by the cDNA contained in ATCC Deposit No. 97242;
  - (d) a polynucleotide encoding at least 30 contiguous amino acids of SEQ ID NO:13 or the cDNA clone contained in ATCC Deposit No. 97242;
  - (e) a polynucleotide encoding at least 50 contiguous amino acids of SEQ ID NO:13 or the cDNA clone contained in ATCC Deposit No. 97242;
  - (f) a polynucleotide of at least 30 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242;
  - (g) a polynucleotide of at least 40 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242;
  - (h) a polynucleotide of at least 50 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242;
  - (i) a polynucleotide of at least 60 contiguous nucleotides of SEQ ID NO:2 or the coding strand of the cDNA clone contained in ATCC Deposit No. 97242; and
  - (j) the complement of (a), (b), (c), (d), (e), (f), (g), (h), or (i).
13. The isolated polynucleotide of claim 12, wherein said polynucleotide is (a).
14. The isolated polynucleotide of claim 13, which comprises nucleotides 124 to 1449 of SEQ ID NO:2.
15. The isolated polynucleotide of claim 12, wherein said polynucleotide is (b).
16. The isolated polynucleotide of claim 15, which comprises nucleotides 121 to 1449 of SEQ ID NO:2.
17. The isolated polynucleotide of claim 12 fused to a heterologous polynucleotide.
18. The isolated polynucleotide of claim 17, wherein the heterologous polynucleotide encodes for a heterologous polypeptide.
19. The isolated polynucleotide of claim 12, wherein the polynucleotide is double

stranded.

20. The isolated polynucleotide of claim 12, wherein said polynucleotide is (c).

21. The isolated polynucleotide of claim 12, wherein said polynucleotide is (d).

22. The isolated polynucleotide of claim 12, wherein said polynucleotide is (e).

23. The isolated polynucleotide of claim 12, wherein said polynucleotide is (f).

24. The isolated polynucleotide of claim 12, wherein said polynucleotide is (g).

25. The isolated polynucleotide of claim 12, wherein said polynucleotide is (h).

26. The isolated polynucleotide of claim 12, wherein said polynucleotide is (i).

27. The isolated polynucleotide of claim 12, wherein said polynucleotide is (j).

28. A vector comprising the polynucleotide of claim 13.

29. A vector comprising the polynucleotide of claim 15.

30. A vector comprising the polynucleotide of claim 20.

31. A vector comprising the polynucleotide of claim 21.

32. A vector comprising the polynucleotide of claim 22.

33. A vector comprising the polynucleotide of claim 23.

34. A vector comprising the polynucleotide of claim 24.

35. A vector comprising the polynucleotide of claim 25.

36. A vector comprising the polynucleotide of claim 26.

37. A vector comprising the polynucleotide of claim 27.

38. A host cell comprising the polynucleotide of claim 13, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

39. A host cell comprising the polynucleotide of claim 15, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

40. A host cell comprising the polynucleotide of claim 20, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

41. A host cell comprising the polynucleotide of claim 21, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

42. A host cell comprising the polynucleotide of claim 22, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

43. A host cell comprising the polynucleotide of claim 23, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

44. A host cell comprising the polynucleotide of claim 24, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

45. A host cell comprising the polynucleotide of claim 25, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

46. A host cell comprising the polynucleotide of claim 26, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

47. A host cell comprising the polynucleotide of claim 27, wherein said polynucleotide is operatively associated with a heterologous regulatory sequence.

48. A method of producing a protein comprising: (a) culturing the host cell of claim 38

under conditions such that said protein is expressed; and (b) recovering said protein.

49. A method of producing a protein comprising: (a) culturing the host cell of claim 39 under conditions such that said protein is expressed; and (b) recovering said protein.

50. A method of producing a protein comprising: (a) culturing the host cell of claim 40 under conditions such that said protein is expressed; and (b) recovering said protein.

51. A method of producing a protein comprising: (a) culturing the host cell of claim 41 under conditions such that said protein is expressed; and (b) recovering said protein.

52. A method of producing a protein comprising: (a) culturing the host cell of claim 42 under conditions such that said protein is expressed; and (b) recovering said protein.

53. A method of producing a protein comprising: (a) culturing the host cell of claim 43 under conditions such that said protein is expressed; and (b) recovering said protein.

54. A method of producing a protein comprising: (a) culturing the host cell of claim 44 under conditions such that said protein is expressed; and (b) recovering said protein.

55. A method of producing a protein comprising: (a) culturing the host cell of claim 45 under conditions such that said protein is expressed; and (b) recovering said protein.

56. A method of producing a protein comprising: (a) culturing the host cell of claim 46 under conditions such that said protein is expressed; and (b) recovering said protein.

(FILE 'HOME' ENTERED AT 20:58:08 ON 01 APR 2002)

FILE 'MEDLINE, BIOSIS, CANCERLIT, LIFESCI, BIOTECHDS' ENTERED AT  
20:58:39

ON 01 APR 2002

L1	1 S 97856
L2	4 S 97175
L3	3 DUP REM L2 (1 DUPLICATE REMOVED)
L4	2 S BSG(W)1 OR BCSG(W)1
L5	1 S BSG(W)I OR BCSG(W)I

## WEST Search History

DATE: Monday, April 01, 2002

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=JPAB,EPAB,DWPI; PLUR=NO; OP=ADJ</i>			
L2	ATCC near3 (97856 or 97175)	2	L2
<i>DB=USPT; PLUR=NO; OP=ADJ</i>			
L1	ATCC near3 (97856 or 97175)	0	L1

END OF SEARCH HISTORY

L1 ANSWER 1 OF 1 BIOTECHDS COPYRIGHT 2002 DERWENT INFO AND ISI

ACCESSION NUMBER: 1998-09949 BIOTECHDS

TITLE: New isolated breast cancer-specific gene;  
human recombinant mamma cancer-specific gene-1  
tumor-associated antigen BCSG1 preparation by  
vector-mediated gene transfer and expression in host cell

AUTHOR: Ji H; Rosen C A

PATENT ASSIGNEE: Hum.Genome-Sci.

LOCATION: Rockville, MD, USA.

PATENT INFO: WO 9833915 6 Aug 1998

APPLICATION INFO: WO 1998-US1804 3 Feb 1998

PRIORITY INFO: US 1997-37080 3 Feb 1997

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 1998-446811 [38]

AN 1998-09949 BIOTECHDS

AB A new DNA sequence is least 95% identical to cDNA in clone ATCC 97175 or  
**97856** encoding a specified protein sequence. Also new are:  
fragments of the new DNA; DNA encoding an epitope-bearing portion of  
mamma cancer specific gene-1 (BCSG1); a vector containing the DNA; a

host cell containing the vector; proteins encoded by the new DNA and protein  
fragments and mutants; and an antibody that specifically binds BCSG1.  
BCSG1 is a mamma cancer marker that is expressed in advanced

infiltrating mamma cancer cells. A lack of expression of BCSG1 in normal or benign  
mamma epithelial cells and a weak expression in low-grade in situ  
carcinomas suggests that overexpression of BCSG1 indicates mamma cancer  
malignant progression. The DNA may be used for mamma cancer diagnosis,  
e.g. using DNA probes or DNA primers, and the protein may be used for

the detection of mamma cancer cells or mamma cancer metastasis, or for the  
clinical management or treatment of mamma cancer. In an example, BCSG1  
cDNA was discovered in a cDNA library derived from mamma cancer and in  
cDNA libraries from brain tissue. The new DNA contained an open reading  
frame encoding a 127 amino acid protein sequence. (72pp)